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Poverty Dynamics of Female-headed Households in Pakistan: Evidence from PIHS 2000-01 and PSLM 2004-05

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ABSTRACT

The paper attempts to empirically test a naïve version of what is rather stylistically termed as "feminisation of poverty", using the sub-sample of female-headed households (FHHs) from two household surveys in Pakistan. Although, the database is constrained by quality factors and small sample size, the following findings add to the richness of current research in this area: (a) The numerical incidence of poverty among households headed by females is less than that for all households in the country, at the national, urban and rural level for both the years. This can be traced to the finding that more than 70 percent of households headed by females receive remittances, (b) The incidence of poverty among FHHs during the period 2000-01 to 2004-05 did not decline as fast as it did for mixed households, nationwide. In urban areas, it did not decline at all, (c) Among the determinants of poverty of FHHs, illiteracy, dependency and rural residence exacerbate poverty, while remittances domestic and/ or foreign reduce poverty, (d) The dynamics of incidence of poverty among FHHs during the period indicated that Illiteracy as the factor exacerbating poverty became less important in 2004-05. Moreover, residence in rural areas was also a weaker factor in determining the incidence of poverty. By far the most notable contribution in reducing the incidence of poverty was self-employment in agriculture in 2004-05.

I. INTRODUCTION

The ultimate objective of development endeavours is generally perceived to be the eradication of poverty. Recent years have witnessed unprecedented efforts at the global level to combat the menace of poverty and deprivation, most notable being the adoption of the Millennium Declaration in 2000, binding 150 nations of the world towards achieving eight Millennium Development Goals by 2015. The first goal is halving poverty by 2015. While concerted efforts are being made internationally for alleviating poverty, there is a growing realisation that poverty is increasingly taking on a feminine form, meaning that globally women are bearing a disproportionately higher and growing burden of poverty. This assertion as articulated by the concept of feminisation of poverty has been under much debate and discussion in development policy circles in recent years. With women representing more than half the global population, rising concerns about feminisation of poverty are not misplaced.

In developing countries, researchers are still grappling to assess the status of poverty among women under a 'simplistic' paradigm, mainly because of the lack of richness in household data collected by statistical agencies and partly by the low status of women in patriarchal, tribal and feudalistic societies. Over the years, the simplistic and naïve paradigm of assessing the poverty status of women by documenting the poverty levels of female-headed households (FHHs) has been replaced by a more holistic approach of assessing their economic and social empowerment in respect of their decision-making and contribution in the consumption and production process of the households. The latest paradigm places heavy demands on the quality of data or heroic assumptions are made about intra-household allocations in the conventional data sets to test its implications. Even testing the simple paradigm for a correct assessment of poverty among FHHS poses the following conceptual and empirical challenges: (1) Women defined as head of households in developed countries are usually those who are economically/socially empowered to make decisions about the household members. This may not be the case in traditional societies like Pakistan where the surveyor may find a widow assigned the HOH status out of respect for her being the eldest in the family. Thus though she may be socially empowered yet lack economic empowerment. (2) The temporary internal or international migration of the male head may render the spouse as the de facto

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HOH but financially she would still remain dependent on remittances. (3) Documentation of Intra-household command over resources in household surveys is still in its infancy, particularly for self-employed household enterprises in urban areas and, in nearly all of the rural areas, where household production and consumption functions are intra-dependent. Expenditure decisions are even less amenable to quantification. Thus these factors have implications for even rough estimates of poverty among female-headed households.

In light of the above quality constraints of the data our empirical analysis, even to test the simple paradigm, should be regarded as preliminary and merely stylistic. The objective of this paper is to estimate and compare the poverty indicators of female-headed households in Pakistan using the PIHS 2000-01 and PSLM 2004-05 household surveys conducted by the Federal Bureau of Statistics. On the basis of selected socio-economic and demographic characteristics of FHHs, we also estimate the likelihood of finding the FHHs below or above poverty levels in a probabilistic modelling framework.

The outline of the paper is as follows: the next section presents a brief review of literature on the simple and the latest paradigms related to "feminisation of poverty". Section 3 presents the comparative analysis of poverty headcounts of FHH with the overall headcounts for the years 2000-01 and 2004-05. It also includes descriptive statistics (including t-tests) of the socio-economic and demographic characteristics by poor/non-poor classification and across the two sampling periods. Section 4 reports the preliminary results of modelling poverty status of FHHs. Summary and conclusions form the last section.

II. LITERATURE REVIEW

The notion of female poverty stems from the seminal work of Diane Pearce, which examined the evolution of poverty in the United States among households headed by single mothers [Pearce (1978)]. Her results showed an increase among poor households of the female-headed households over time, a phenomenon she referred to as the "feminisation of poverty". Following her research, the term 'feminisation of poverty' became synonymous with the poverty of female-headed households, which were considered the poorest of the poor. In the policy arena, the poverty of female-headed households has in effect "become a proxy for women's poverty" [Chant (2003)]. This is in large part due to the fact that conventional measures of poverty based on household income or consumption fail to capture intra-household inequalities in distribution of income/ consumption among men and women separately. This unavailability of gender specific data led to the measurement of women's poverty through comparison of poverty levels of female and male-headed households.

Studies from both the developed and developing countries show that FHHs have different socio-economic characteristics from the conventional male-headed households (MHHs),[1] that increase the former's vulnerability to poverty.

FHHs are postulated to be poorer than MHHs because women are less likely to have access to productive assets like land and other resources necessary for starting income generating activities. Moreover, they are also likely to lack the skills required for setting up and sustaining small enterprises that help in income generation. In situations where headship and lone motherhood coincide, women have heavier work burdens and correspondingly fewer opportunities for earning an income [Moghadam (1997)]. Constraints on socio-economic mobility of women in FHHs due to cultural, legal and labour market barriers, serve to further restrict their income earning potential.[2] Living in an FHH is also associated with an intergenerational transfer of poverty.[3]

Recent research from the developing world, however, has questioned the premise that FHHs are more likely to be poor than MHHs. A number of studies have shown that FHHs are not necessarily poor (in terms of income) and/ or the worst off among the poor.[4] The FHHs are not a homogeneous group and the poverty status of these households depends mainly on why a woman has had to assume this responsibility such as migration of the man of the house or her widowhood. Moreover, poverty is less likely to be transferred across generations in an FHH. In fact, female heads are more likely to invest in the human capital formation of their offspring than their male counterparts. Studies have indicated that children in FHHs may be better off in terms of educational attainment, nutrition and health than their counterparts in MHHs.[5]

The available empirical evidence from South Asian countries does not show FHHs to be poorer than MHHs. Dreze and Srinavasan (1995) find that FHHs are less poor than MHHs in rural India. Gangopadhyay and Wadhwa (2004) using data from three rounds of the National Sample Survey (NSS)[6] find FHHs in India to be less poor than MHHs at the national level and in the rural areas, but find higher incidence of poverty among FHHs residing in urban areas. Their analyses, moreover, suggest a gender bias in the incidence of poverty if households are categorised by the marital status of the household head in which case the 'not currently married' FHHs appear to be more vulnerable to poverty. In Bangladesh, the incidence of poverty among FHHs is observed to be higher in comparison to MHHs, the difference being more pronounced in rural areas. In Nepal, FHHs are observed to be poorer than MHHs, although the gap varies significantly with the place of residence.

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[1] These include Kossoundji and Mueller (1983) and Goldberg and Cremen (1990).

[2] For detailed discussion, see Moghadam (1997) and Kabeer (2003).

[3] As cited in Fuwa (1999).

[4] Chant (2003 and 2006) and Quisumbing, *et al*. (2001).

[5] See Hoddinott and Haddad (1991), Handa (1996)and Lorge (1996).

[6] The paper uses data from the 43rd, 50th and 55th rounds of the NSS (1987-88, 1993-94 and 1999-2000).

In case of Pakistan, Mohiuddin (1989) examined the extent of poverty among a sample of 100 domestic female servants in the city of Karachi, using five different definitions of household headship[7]. She found that the incidence of income poverty was nearly twice in female-headed households as compared to male-headed households (83 percent vs. 43 percent).

Siddiqui (2001) carried out an in-depth analysis of the gender dimensions of poverty in Pakistan by computing all three FGT measures of poverty separately for both the female and male-headed households, using data from the 1993-94 and 1996-97 rounds of HIES. Her findings show that the poverty headcount increased significantly in rural Pakistan for both male and female-headed households between 1993-94 and 1996-97, from 25.3 percent to 37.4 percent for male and from 26.3 percent to 38.5 percent for female-headed households. However, the poverty headcount declined for both male and female-households in the urban areas of the country, during the period under review. In terms of the depth and severity of poverty, the poverty gap index increased in rural areas for both male and female-headed households, with the increase being much sharper for male-headed households; while the squared poverty gap index fell for both rural male and female-headed households. In case of urban areas, both the depth and severity of poverty declined for male and female-headed households, during the period under review.

More recently, Cheema (2005a) using data from the Pakistan Integrated Household Survey (PIHS) 2001-02, found FHHs to be less poor than their male counterparts (22 percent vs. 35 percent). However, the finding is reversed in cases where the female head was the main bread winner.

Most of the empirical work carried so far using household income and expenditure surveys is based on the examination of the incidence of poverty in FHHs in relation to MHHs, even taking into account the factor of heterogeneity among FHHs. A new strand of research has challenged this narrow construct of female poverty. It has been argued that conventional measures of poverty based on household income or consumption fail to capture intra-household inequalities in distribution of income/consumption among men and women separately. The traditional measures of poverty view the household as a single unit, implying the existence of a single household welfare function, which assumes that all members of the household pool their resources and enjoy the same level of individual welfare. A major consequence of using this unitary model of the household is that gender differentials in welfare are not taken into account. As a result poverty alleviation policies may fail to target women.

[7] All these five definitions were based on the degree of economic responsibility borne by the household head, unlike the conventional definition employed in household surveys, where the person considered as household head by a majority of household members is reported as the household head.

Some studies have attempted the use of simulations to describe intra-household inequalities in distribution of income. While not a perfect substitute, these simulations can give valuable insights into how intra-household inequalities can affect the estimates of poverty for men and women. Medeiros and Costa (2007) investigated whether feminisation of poverty had taken place in eight Latin American countries[8] during the period 1990-2004, employing four different definitions of feminisation. In order to analyse the effect of intra-household inequalities on poverty, they employed simulations of income proportions retained by all earning individuals within a household[9]. Their results showed that there was no significant difference in the incidence, intensity or severity of poverty among men and women, when intra-household inequalities are not taken into consideration. However, when intra-household inequalities were simulated, all measures of poverty for women increased, with the incidence of poverty among women increasing by 4-10 percentage points, if individuals retained 25 percent of their income and distributed the remaining 75 percent. When individuals retained 75 percent of their income distributing only 25 percent, the incidence of poverty for women was seen 11–22 percentage points higher.

III. COMPARATIVE PROFILE OF FHHS SOCIO-ECONOMIC STATUS

Table 1 gives the poverty profile of FHHs in terms of three conventional indicators, i.e., headcount, poverty gap and severity of poverty (poverty gap squared).[10] These population-weighted indicators for FHHs are compared with corresponding indicators for all households and male-headed households (MHHs).[11] We note that:

(a) The headcount ratio for FHHs i.e., the proportion of households below the poverty line, are smaller than the corresponding ratio for mixed households and MHHs at the national, urban and rural levels and for both years.
(b) In the year 2004-05, the poverty headcount ratio of FHHs in urban areas is marginally higher than the headcount ratio in 2000-01.
(c) The incidence of poverty at all levels for mixed households is greater by 61-101 percent (39.8 vs. 24.7) as compared to poverty incidence of FHHs in 2000-01. This difference narrows down to the range of 23-29

[8]The countries studied included Argentina, Bolivia, Brazil, Colombia, Chile, Costa Rica, Mexico and Venezuela.

[9]The simulations alter the distribution of income within the households, but do not affect the distribution among households.

[10]The official poverty line notified by the Government of Pakistan has been used to compute the FGT measures of poverty. For details see Cheema (2005b).

[11]The definition of household head employed in PIHS and PSLM is given in Appendix 1.

percent in 2004-05, indicating that the improvement in poverty incidence was not as rapid among FHHs as it was for all households in the national, urban and rural areas.

The other two indicators, poverty gap and severity of poverty, are aggregate measures of the 'spread' of the poor below the poverty line, i.e., they aggregate the distance (proximity or remoteness) of all poor individuals from the poverty line. A lower value indicates that most of the poor are bunched around the poverty line. The lower value of these two indicators for FHHs compared to corresponding indicators for all households suggest that more FHHs were closer to the poverty line than all households in 2000-01. However, the values for FHHs are higher than the corresponding values for all households and MHHs in 2004-05. This suggests that the *intensity of poverty among poor FHHs is higher in 2004-05* as compared to all households and the MHHs.

Table 1

Household Indicators of Poverty
(Weighted and Head of Households between the Ages 15–60)

		Poverty Headcount		Poverty Gap		Severity of Poverty	
		2000-01	2004-05	2000-01	2004-05	2000-01	2004-05
All Households	Overall	34.8	23.3	7.16	4.43	2.16	1.33
	Urban	22.8	14.5	4.50	2.65	1.27	0.74
	Rural	39.8	27.5	8.26	5.28	2.53	1.60
FHHs	Overall	20.9	17.4	3.53	4.53	0.87	1.36
	Urban	11.3	11.8	2.28	2.70	0.60	0.76
	Rural	24.7	19.8	4.04	5.41	0.97	1.65
MHHs	Overall	35.8	23.7	7.42	2.95	2.26	0.80
	Urban	23.6	14.7	4.65	1.85	1.32	0.53
	Rural	40.9	28	8.56	3.42	2.64	0.92

Source: PIHS 2000-01 and PSLM 2004-05.

In Table 2, we compare the socio-economic status (SES) of the sample of all FHHs for the year 2000-01 and 2004-05.[12] Note the following:

(a) The average age of female head of household in both the samples is around 41 years. The proportion of married female household heads at 64-65 percent is similar during both 2000-01 and 2004-05, although the proportion of widowed female heads is slightly higher in 2000-01 (34 percent vs. 32 percent).

[12]The summary statistics for the weighted sample for both years are reported in Annex Table 1A.

Table 2

FHHs: Descriptive Statistics (Entire Sample)

	2000-01		2004-05	
	Mean	Std. Deviation	Mean	Std. Deviation
Age	40.91	10.10	40.82	9.70
Married	0.64	0.48	0.65	0.48
Widow	0.34	0.47	0.32	0.47
Illiterate	0.76	0.43	0.72	0.45
pai_emp1	0.10	0.30	0.09	0.28
Unpaid	0.04	0.19	0.01	0.10
self_agr	0.06	0.25	0.07	0.26
Sel_nagr	0.03	0.18	0.04	0.19
Dum_remi	0.75	0.43	0.71	0.46
Dependent	2.95	2.17	2.99	2.16
Rural	0.61	0.49	0.61	0.49
Punjab	0.53	0.50	0.50	0.50
Sindh	0.07	0.25	0.07	0.25
Khyber Pakhtunkhwa	0.36	0.48	0.40	0.49
Sample Size	949		930	

(b) The analysis of female household heads by employment status reveals that the highest proportion of economically active female heads is paid employees, although their share declined by one percentage point during 2001-05. This is followed by female heads self-employed in the agricultural sector, whose share increased from 6 percent in 2000-01 to 7 percent in 2004-05. Another noteworthy development is the significant decline in the proportion of female heads engaged as unpaid family workers between 2001-05, contrary to the trends observed overall for the employed work force of Pakistan during this corresponding period.[13]

(c) A significant majority of female-headed households receive remittances from both domestic and foreign sources, with their share declining by 4 percentage points during 2001-05.

(d) The female headed households, on average, support 3 dependents.

(e) The regional analysis shows that 61 percent of female-headed households are located in rural areas. The provincial distribution of the sample shows that Khyber Pakhtunkhwa is home to the highest proportion of female heads in 2000-01 (54 percent), followed by Punjab (41 percent) and Sindh (3 percent). In 2004-05, the largest

[13]For a detailed discussion on trends in rising share of unpaid family workers in the national work force during 2001-02 and 2005-06, see Shahnaz, *et al.* (2008).

share of the sample belonged to Punjab at 50 percent, followed closely by Khyber Pakhtunkhwa at 49 percent, while the share of Sindh in the sample jumped to 26 percent.

The sample of female-headed households below the poverty line is compared with female-headed households above the poverty line for both years, i.e., 2000-01 and 2004-05. The summary statistics of the relevant variables for both years are given in Tables 3 and 4, along with the corresponding t-statistics, which test for the difference in mean values of characteristics of female-headed households below the poverty line with that of their counterparts above the poverty line. Table 3 shows that during 2000-01, a greater proportion of female heads below the poverty line is married, illiterate, residing in rural areas and in Khyber Pakhtunkhwa, as compared to their non-poor counterparts. The mean proportions of female heads below the poverty line are found to be statistically different from female heads above the poverty line in case of age, illiteracy, number of dependents, rural residence, Punjab and Khyber Pakhtunkhwa. These differences among the poor and non-poor female-headed households are very similar to differences among the two categories in all households. In the remaining socio-economic attributes, the proportion of female-headed households below the poverty line is not statistically different from their counterparts above the poverty line. During 2004-05, the mean proportions of female-headed households below the poverty line are seen to differ statistically with those of non-poor female-headed households in respect of illiteracy, receipt of remittances, number of dependents, residence in rural areas, Punjab and Khyber Pakhtunkhwa (Table 4).

Table 3

FHHs: Descriptive Statistics (Below vs. Above Poverty 2000-01)

	Below Poverty		Above Poverty		
	Mean	Std. Deviation	Mean	Std. Deviation	t-values
Age	39.16	9.55	41.28	10.17	–2.45
Married	0.70	0.46	0.63	0.48	1.57
Widow	0.28	0.45	0.35	0.48	–1.60
Illiterate	0.96	0.19	0.72	0.45	6.90
pai_emp1	0.08	0.28	0.10	0.30	–0.72
Unpaid	0.04	0.19	0.04	0.20	–0.19
self_agr	0.09	0.29	0.06	0.24	1.53
sel_nagr	0.01	0.11	0.04	0.19	–1.69
dum_remi	0.76	0.43	0.74	0.44	0.50
Dependents	4.31	2.06	2.66	2.09	9.24
Rural	0.78	0.41	0.58	0.49	4.92
Punjab	0.41	0.49	0.56	0.50	–3.42
Sindh	0.05	0.22	0.07	0.26	–1.17
KPK	0.52	0.50	0.32	0.47	4.78
Sample Size	165		784		

Table 4

FHHs: Descriptive Statistics (Below vs. Above Poverty 2004-05)

	Below Poverty		Above Poverty		
	Mean	Std. Deviation	Mean	Std. Deviation	t-values
Age	39.48	9.59	41.05	9.70	-1.73
Married	0.63	0.48	0.65	0.48	-0.37
Widow	0.34	0.48	0.32	0.47	0.58
Illiterate	0.93	0.26	0.68	0.47	5.93
pai_emp1	0.09	0.29	0.09	0.28	0.16
Unpaid	0.01	0.12	0.01	0.09	0.67
self_agr	0.04	0.19	0.08	0.26	-1.60
sel_nagr	0.06	0.24	0.03	0.18	1.54
dum_remi	0.63	0.48	0.72	0.45	-1.98
Dependents	4.33	2.08	2.76	2.09	8.02
Rural	0.74	0.44	0.59	0.49	3.30
Punjab	0.41	0.49	0.52	0.50	-2.24
Sindh	0.03	0.17	0.08	0.26	-1.93
KPK	0.54	0.50	0.38	0.49	3.50
Sample Size	134		796		

Following this comparison between the socio-economic attributes of female-headed households below and above the poverty line, a similar analysis is carried out for the poor female-headed households between the years 2000-01 and 2004-05. The t-values of the sample of female-headed households living below the poverty line during 2000-01 and 2004-05 are shown in Table 5. No statistically significant differences can be found among socio-economic characteristics of the proportions of female-headed households below the poverty line in both the years under review, except in case of self-employment in non-agricultural sector and inflows of remittances from domestic and foreign sources.

Table 5

FHHs Living Below Poverty: T-test for Differences in SES Characteristics (2000-01 and 2004-05)

	t-value
Age	–0.28
Married	1.14
Widow	–1.08
Illiterate	1.46
pai_emp1	–0.14
Unpaid	1.14
self_agr	1.85
sel_nagr	–2.29
dum_remi	2.46
Dependents	–0.08
Rural	0.87
Punjab	0.03
Sindh	0.81
KPK	–0.38
Sample Size	299

Modelling the Poverty Status of FHHs

In order to examine in more detail the major socio-economic determinants as well as dynamics of poverty incidence among households headed by females during 2000-01 and 2004-05, two probit models are estimated separately for 2000-01 and 2004-05. The results of the probit model estimated for the sample of FHHs in 2000-01 and 2004-05 are presented in Table 6. The columns depict estimated parameters, z-statistics and probability derivatives respectively at the mean of explanatory variables. The probability derivatives indicate the change in probability on account of a one-unit change in a given independent variable after holding all the remaining variables constant at their mean. The following findings are selectively highlighted:

Table 6

Probit Estimates for Female Heads Living Below/Above Poverty Line between 2000-01 and 2004-2005

	2001-02			2004-05		
	Coef.	z-statistics	dF/dx	Coef.	z-statistics	dF/dx
Age	–0.010	–1.56	–0.002	–0.014	–2.03**	–0.002
Married	–0.512	–1.23	–0.110	–0.206	–0.54	–0.038
Widow	–0.296	–0.71	–0.055	0.104	0.28	0.019
Illiterate	1.084	5.22**	0.155	0.768	4.46**	0.110
Paid_emp	0.114	0.57	0.024	0.100	0.49	0.019
Unpaid	–0.181	–0.69	–0.032	0.237	0.50	0.048
Self_agr	–0.037	–0.19	–0.007	–0.552	–2.15**	–0.070
Self_nagr	–0.673	–1.75*	–0.089	0.411	1.56	0.090
Dum_remi	–0.338	–1.94*	–0.074	–0.479	–3.07**	–0.095
Dependants	0.200	7.75**	0.039	0.182	6.72**	0.032
Rural	0.294	2.16**	0.056	0.221	1.65*	0.038
Punjab	0.635	2.06**	0.123	0.319	0.88	0.056
Sindh	0.479	1.24	0.118	–0.056	–0.12	–0.009
KPK	0.785	2.54**	0.177	0.498	1.38	0.093
Constant	–2.304	–3.80	–	–1.838	–2.94	
Log likelihood = –362.39255				Log likelihood =–321.1071		

*Significant at 10 percent level.
**Significant at 5 percent level.

- The probability of FHHs to be living below the poverty line is seen to decline with age of the household head in both the years, although the finding for 2000-01 is not statistically significant.
- Married female heads have a lower probability of being poor during both the years under review. However, the findings for both years are not statistically robust. Widowed female household heads are observed

to have a lower probability of being below the poverty line in 2000-01, while having a greater probability of being poor in 2004-05. These findings, however, are again not statistically significant.

- Illiterate female heads are significantly more likely to be poor during both the years under review.
- The analysis of female headed households living below the poverty line by employment status gives mixed results for both the years, i.e., 2001-02 and 2004-05. Households with a female head working as paid employee have a higher probability of being poor in 2001-02, while households where the female head is unpaid family worker or self employed in both the agricultural and non-agricultural sectors have a lower probability of being poor. However, only the finding for self-employed in the non-agricultural sector is statistically significant. The results for 2004-05 reveal a higher probability of being below the poverty line for households where the female head is employed as paid employee, unpaid family worker and self employed in the non-agricultural sector. These results, however, are not statistically robust. Interestingly, households where the female head is self employed in the agricultural sector have a significantly lower probability (7 percent) of being poor.
- Another noteworthy finding is that female-headed households receiving remittances from both domestic and foreign sources have a lower and significant[14] probability of being below the poverty line during both the years. This is consistent with the *a priori* expectation as well as the available empirical evidence that female headship in case of the male bread winner being away from home is associated with lower levels of poverty.
- The probability of FHHs to be living below the poverty line is seen to increase with the number of dependents by 3.9 percent and 3.2 percent, respectively, during 2001-02 and 2004-05. The results for both the years are statistically significant.
- FHHs residing in rural areas have a significantly higher probability of being poor during both 2001-02 and 2004-05, although the finding for 2004-05 is at the lower confidence level of 10 percent.
- FHHs located in the provinces of Punjab, Sindh and Khyber Pakhtunkhwa are seen to have a greater probability of being poor during 2001-02, although the finding for Sindh is not statistically significant. On the other hand, in 2004-05 FHHs residing in Sindh are observed to have a lower probability of being below the poverty line, while those in Punjab and Khyber Pakhtunkhwa are more likely to be poor. However, all these results for 2004-05 are not statistically significant.

[14] The results for 2000-01 are obtained at the lower confidence level of 10 percent.

IV. SUMMARY AND POLICY IMPLICATIONS

In analysing the sub-sample of households headed by females from PIHS 2000-01 and PSLM 2004-05 surveys, the paper empirically tests a naïve and stylistic version of "feminisation of poverty". Although, the database is constrained by quality factors and small sample size, the following findings will add to the richness of current research in this area:

(a) The numerical incidence of poverty among households headed by females is less than that for all households in the country, at the national, urban and rural level. This can be traced to the finding that more than 70 percent of households headed by females (as defined in the survey) receive remittances.[15]

(b) The incidence of poverty among FHHs during the period 2000-01 to 2004-05 did not decline as fast as it did for mixed households, nationwide. In urban areas, it *increased* marginally, while in rural areas the decline can be attributed to above average performance of the agriculture sector in that year.

(c) Among the poor FHHs, the severity of poverty increased notably between the two periods, i.e., 2000-01 and 2004-05 at the national, urban and rural levels. The increase was higher in 2004-05 as compared to all households and male-headed households.

(d) Given the increased severity of poverty in FHHs in 2004-05, targeting BISP to women among poor households is an appropriate strategy. The unconditional cash transfer of Rs.1000 per month to poor households, including those headed by women will *more than compensate* for the severity of poverty as indicated by low poverty gap and severity of poverty indices. However, since cash transfer is based on assessment of assets rather than income and its sources, there is no way to filter remittances receiving FHHs from other FHHs and this will constitute leakage of funds to ineligible FHHs.

(e) The determinants of incidence of poverty among households headed by women identified by probit analysis in the paper further confirm the causal empiricism and past research. Illiteracy, dependency and rural residence exacerbate poverty, while remittances domestic and/ or foreign reduce poverty. Thus, reducing illiteracy even among adult women will pay off in reducing poverty levels among FHHs. Widespread family planning practices and social protection measures will further reinforce this trend.

(f) Did the dynamics of factors contributing to poverty among FHHs change during the period under study? Illiteracy as a factor

[15] Ideally one should also estimate the poverty incidence of only working women, which was not possible due to very small sample size.

exacerbating poverty became less important in 2004-05. Moreover, residence in rural areas was also weaker in determining the incidence of poverty. By far the most notable contribution in reducing the incidence was self-employment in agriculture in 2004-05.[16] In order to fully appreciate this change in dynamics and regard it as sustainable, one needs to fully understand the survey recording of the concept of "self employment" of women in agriculture. If it implies improvement in the sense that women are independently operating/ managing land and its output/income, then it is a welcome change but if it is related to exceptional performance of agriculture in that year than it may not be sustainable. Moreover, if self-employment is related to the symbolic respect of the eldest female as the owner and operator of the family land by her adult male members, than it does not imply economic empowerment and betterment *per se*.

(g) Does this simple and preliminary study on dynamics of poverty among FHHs enable us to speculate on the current status of poverty among FHHs, given a regime shift in food prices as well as macro instability? As FHHs are heavily dependent on remittances, specifically those dependent on foreign remittance are less likely to suffer as improved Rupee exchange rate will partly offset the increase in food prices. Thus, one can safely speculate that poverty incidence of women household heads receiving foreign remittance in urban or rural areas will not rise above the national level and most likely remain below it, even though the absolute poverty levels of both groups may rise. Similarly, FHHs self-employed in agriculture will not be worse off due to better agricultural prices but risk slipping into poverty because of poor agriculture performance, in line with poverty incidence of mixed households. The FHH segment that are residents in urban areas or receive domestic remittances whether in rural or urban area will be specially vulnerable to slipping into poverty due to a regime shift in food prices and reduced employment opportunities and/ or slower increase in wage earnings compared to inflation.

APPENDIX 1

The household head is defined in PIHS and PSLM as follows:

If a person lives alone, that person will be considered as the head of the household. If a group of persons live and eat together, the head of the household shall be that person who is considered as the head by the household members. When husband, wife, married and unmarried children form one household, the

[16] In spite of the fact that percentage of female heads engaged in self-employment in agriculture declined from 9 percent in 2000-01 to 4 percent in 2004-05.

husband is generally reported as the "head". When parents, brothers and sisters comprise a household, either a parent or the eldest brother or sister is generally taken as the head by the household members. When a household consists of several unrelated persons either the respondent may be relied upon or the enumerator may arbitrarily select the eldest one as the "head". It is the safest and most convenient way to ask the household about their head. In special dwelling units the resident person in-charge (e.g. manager) may be reported as the "head".

Appendix Table 1

Definition of Variables

Dependent Variable	
Pov (2000-01)	=1, if female headed household is below poverty line=723.4, 0 otherwise
Pov (2004-05)	=1, if female headed household is below poverty line=878.64, 0 otherwise
Independent Variable	
Age	age of the female headed household
Married	=1, if currently married
Widow	=1, if widow
Illiterate	=1, if female head is illiterate
pai_emp1	=1, if female head is paid employees
Unpaid	=1, if female head is unpaid family helpers
self_agr	=1, if female head's occupation is self-employed in agriculture
sel_nagr	=1, if female head's occupation is self-employed in non-agriculture
dum_remi	=1, if receiving remittances from home and foreign countries
Dependent	number of dependents aged less than and equal to 15 years and greater than and equal to 65 years
Rural	=1, if rural areas
Punjab	=1, if living in Punjab
Sindh	=1, if living in Sindh
KPK	=1, if living in KPK

Appendix Table 1A

Weighted Descriptive Statistics

	2001-02		2004-05	
	Mean	Std. Deviation	Mean	Std. Deviation
Pov1	0.21	0.41	0.17	0.38
Age	41.52	9.62	41.01	9.48
Married	0.66	0.47	0.66	0.47
Widow	0.32	0.47	0.32	0.46
Illiterate	0.78	0.41	0.72	0.45
pai_emp1	0.09	0.28	0.07	0.25
Unpaid	0.06	0.24	0.01	0.11
self_agr	0.09	0.28	0.09	0.29
Sel_nagr	0.03	0.17	0.03	0.17
Dum_remi	0.75	0.43	0.69	0.46
Dependent	3.69	2.32	3.61	2.33
Rural	0.72	0.45	0.70	0.46
Punjab	0.66	0.47	0.63	0.48
Sindh	0.07	0.25	0.08	0.28
KPK	0.26	0.44	0.28	0.45

Appendix Table 2A

Weighted Probit estimates 2001-02 and 2004-05

	2001-02			2004-05		
	Coef.	z-statistics	dF/dx	Coef.	z-statistics	dF/dx
Age	–0.009	–1.52	–0.002	–0.004	–0.55	–0.001
Married	–0.774	–1.92*	–0.178	–0.282	–0.87	–0.065
Widow	–0.523	–1.31	–0.095	–0.137	–0.42	–0.029
Illiterate	0.978	4.98**	0.144	0.699	4.55**	0.130
Paid_Emp	0.221	1.13	0.049	0.401	2.05**	0.105
Unpaid	–0.373	–1.53	–0.061	0.182	0.43	0.044
Self_agr	–0.099	–0.55	–0.019	–0.669	–3.02**	–0.107
Self_nagr	–0.513	–1.51	–0.077	0.512	1.93*	0.142
Dum_remi	–0.103	–0.59	–0.022	–0.385	–2.63**	–0.092
Dependent	0.205	7.77**	0.042	0.106	4.70**	0.023
Rural	0.305	1.95*	0.057	0.296	2.10**	0.061
Punjab	0.525	0.93	0.095	0.472	0.64	0.097
Sindh	0.478	0.77	0.120	0.413	0.54	0.108
KPK	0.731	1.29	0.180	0.777	1.04	0.203
Constant	–2.132	–2.78**	–	–2.068	–2.36	–
	Log likelihood =–362.9393			Log likelihood = –375.57708		

*Significant at 10 percent level.

**Significant at 5 percent level.

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